

## PRIVATE SECTOR INVESTMENT AND UNEMPLOYMENT IN NIGERIA

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### Abstract

This study examines Private sector investment and unemployment in Nigeria. The objective of the research is to ascertain the impact of private sector investment on unemployment in Nigeria. The study utilized time series data obtained from the Central Bank of Nigeria Statistical Bulletin, National Bureau of Statistics, and ILO Data Base with respect to Nigerian labour force. All the variables are subjected to unit roots and co integration tests. Following the variables different orders of integration, the Auto-Regressive Distributed Lag (ARDL) Model was adopted in data analysis. Findings from results showed that private sector investment has negative and significant impact on unemployment in Nigeria both in the short run and in the long run. That is, 1 percent increase in private sector investment leads to 5.5 percent decrease in unemployment in Nigeria in the short run and 17.1 percent decrease in unemployment in Nigeria in the long run. The study recommends that the federal government of Nigeria pursues policies geared at providing enabling environment for private sector investment to expand. Some of such policies include reduction in external debt GDP ratio because of the hypothesized debt overhang effect, increase in public investment in the area of infrastructural development, functional institutions and good governance which will crowd in private sector investment.

**Keywords:** Private sector credit, Unemployment, ARDL model

### Introduction

Economic policies pursued vigorously by every developing nation include sustained economic growth and unemployment rate reduction. Both policies are integral and interdependent in the pursuance of economic development objectives. Attainment of these macroeconomic objectives have remained issues that continue to receive attention in developing countries, particularly those in Africa where high-level poverty exists with increasing unemployment rates. Unemployment, the state of being qualified and willing to work, but cannot find any economic rewarding work to do is a societal malady, which the victim never enjoys. The problem of unemployment in Nigeria has been increasing over the past decades, but the problem became a worrisome situation since year 2000 when it maintained a double digit variable. In year 2000, the unemployment rate was 18%, in 2010, it averaged 21.1%, 23.9% in 2011, and 24.3% in 2012, 29.5% in 2013, 28.9% in 2014 it averaged 28.9%, in 2015 it averaged 18.9%, in 2016 it averaged 21.0 %, in 2017 it averaged 25.3% and in 2018, it averaged 22.6%. (NBS, various years).

Even though many studies have investigated unemployment related issues, this study focuses on investigating private sector investments and unemployment in Nigeria.

### Literature review

#### Unemployment in Nigeria

According to the Central Bank of Nigeria (2003) the national unemployment rate, rose from 4.3% in 1970 to 6.4 % in 1980. The high rate of unemployment observed in 1980 was attributed largely to depression in

the Nigerian economy during the late 1970s. Specifically, the economic downturn led to the implementation of stabilization measures, which included restriction on exports, which caused import dependency of most Nigerian manufacturing enterprises, which in turn resulted in Operation of many companies below their installed capacity. This development led to the close down of many industries while the survived few were forced to retrench a large proportion of their workforce. Specifically, total disengagement from the Federal Civil Service rose from 2, 724 in 1980 to 6,294 in 1984 (Oduola, 2001).

Owing to this, the national unemployment rate fluctuated around 6.0% until 1987 when it rose to 7.1 percent. It is important to state here, that SAP adopted in 1986, had serious implications on employment in Nigeria, as unemployment rate declined from 7.1% in 1987, to as low as 1.8 % in 1995, after which it rose to 3.4% in 1996, and hovered between 3.4% and 4.7% between 1996 and 2000. The analysis by educational status also suggests that people who have been the major affected by unemployment are those without basic education. For instance, persons with and without primary school education accounted for 76.8% to 80.6% of the unemployment in 1974 and 1978 respectively (Douglason et al, 2006).

In recent times however, the situation has been compounded by the increasing unemployment of professionals such as accountants, engineers, among others. According to a 1974 survey, reported by Aigbokhan (1998) graduate unemployment accounted for less than 1% of the unemployed, in 1974, by 1984, the proportion rose to 4% for urban areas and 2.2 % in the rural areas.

### **Efforts in combating unemployment in Nigeria**

Some of the efforts made by Nigerian government to combat unemployment in Nigeria include:

#### **1. National Directorate of Employment**

One of the steps taken by the Nigerian government to reduce the problem of unemployment in Nigeria was the establishment of the National Directorate of Employment (NDE), which was established in November 22, 1986. The objective of NDE was to promptly and effectively fight unemployment by designing and implementing innovative programmes, which are directed towards the provision of training opportunities through the guidance and management support services to graduate farmers and small scale entrepreneurs. The objectives of NDE spanned across the following programmes:

- Agricultural development programme
- Youth employment and vocational skills development programme
- Special public works
- Small scale industries and graduate employment programme

The aim of the agricultural programme is to generate employment for graduates, non-graduates and school leavers in the Agricultural sector, with emphasis on self-employment in agricultural production and marketing. The programme is monitored by a team of Agricultural professionals in the Agricultural department of the directorate. However, factors, which include inadequate funding, and late release of funds from the federation account among others, have impaired the effectiveness of the NDE agricultural programmes (Nwajuba, Obilor, and Uwazie, 2006).

#### **i. National Economic Employment and Development Strategy**

The National Economic Employment and Development Strategy (NEEDS) was introduced in 2003, in order to confront the various macroeconomic imbalances, social challenges and structural problems in the Nigerian economy. One of the principal goals is to build a modern Nigerian that maximizes the potential of every citizen to become the largest and strongest African economy, and a force to be reckoned with in the world. To achieve this goal NEEDS, as a development strategy anchored on the private sector is to engineer wealth creation, employment generation and poverty reduction.

However, for NEEDS to achieve its objectives there's need to design many integrated programmes that can generate employment for women and youths to enhance growth and development (Adebayo, 2006). As it is a medium – termed reform based development strategy, and action plan for the period 2003-2007, the impact of NEEDS is yet to be felt, in combating unemployment problem as unemployment rate was still high at 29.5 % in 2013.

Finally, the government undertook some direct actions geared towards generating employment. Such effort was the Public Works Programme that commenced across the 36 states and the federal capital territory in 2011. This programme engaged private-sector contractors to implement simple, labour-intensive public works in areas such as the renovation and maintenance of buildings: schools, hospitals, road rehabilitation, etc. (African Economic Outlook, 2011).

#### **Private sector investment in Nigeria**

Private sector investment in Nigeria is faced with some daunting challenges. For decades, Nigeria's economy is characterized by growing dominance of the public sector over private sector. The

private sector was dogged by weaknesses inherent in its skewed structure: dominated by a few multinationals. Other problems included the poor state of physical infrastructure, particularly road networks, electricity and water supply; high cost and limited access to bank credit; high cost of imported raw materials and spare parts; high production cost; inadequate security; corruption; weak enforcement of contracts; and lack of skilled labour.

Akpokodje (1998) notes that infrastructure deficiency has been the most prominent constraining factor of doing business in Nigeria. According to him, Nigeria's infrastructure does not meet the needs of the average investor, thereby inhibiting and increasing the cost of doing business. The biggest infrastructure problem is electric power supply. Electric power is regarded as a strategic resource and it represents the most important requirement for moving the private sector forward. Nigeria's power system is so inadequate that it has held back economic progress and social well being for several years. It should be noted, however, that electricity supply is capital intensive and cannot be funded adequately by the government alone. The sector therefore needs to be reformed in order to attract private sector participation.

The existing macroeconomic policies have also been uncondusive for a vibrant private sector investment. These include interest and exchange rate policies as well as other sectoral policies. Most entrepreneurs in Nigeria inadvertently reduced their borrowings from banks due to high interest rates and the short-term nature of the available loans. At the same time, banks were primarily used to finance consumer imports and for speculation in the foreign exchange markets. These factors have combined to act as deterrents to foreign investment flows and induced many

Nigerians to take their money and skills abroad.

In spite of the problems and constraints, Nigeria has a strong and potentially vibrant private sector which can quickly respond if the business environment is improved. In order to enhance the prospects for better performance of private sector investment, the National Economic Empowerment and Development Strategy (NEEDS) has enunciated various measures in the policy document. Under the NEEDS, the dominance of government in running business would be reversed and government would rather redirect its efforts to providing essential services. In other words, government would act as a facilitator of economic development by creating and maintaining an environment that enables Nigerians to implement livelihood strategies and achieving personal goals. To this end, the government is expected to develop infrastructure, particularly power generation, transport and telecommunications infrastructure to stimulate the growth of the private sector.

#### **What has Nigerian government done in expanding private sector investment?**

The Federal Government of Nigeria has employed monetary, fiscal and industrial policy measures and incentives to promote small and medium scale enterprises. Specifically, the government has been active in the following areas:

- Funding and setting up industrial areas and estates (to reduce overhead costs)
- Providing local finances through its agencies the Federal Ministry of industries (Small-Scale Industry Credit Scheme SSICS), the Nigerian Industrial Development Bank for Commerce and Industry

(BCI), the Central Bank of Nigeria and Small and Medium Scale Enterprises (SME) Apex Unit;

- Facilitating and guaranteeing external finance through the World Bank, African Development Bank and other international institutions willing to, and capable of assisting SMIs;
- Facilitating the establishment of the National Directorate of Employment (NDE) which also initiates the setting up of new SMIs;
- Setting up through Decree No. 2 of 1989, the National Economic Reconstruction Fund (NERFUND) which is a source of medium to long-term local and foreign loans for small and medium scale businesses, particularly those located in the rural areas;
- Initiating the Family Economic Advancement Programme (FEAP); and
- Provision of technical, training and advisory assistance programmes through establishment of Industrial Development Centre etc.

Some of the past policy measures taken by the government to boost the performance of SMIs and enhance employment generations were as follows:

- i. Small Scale Industries Credit Scheme (SSICS)

The Federal Military Government set up in 1971, a Small Industries Development Programme to provide technical and financial support for SMIs. This led to the creation of the Small Industries Credit Fund (SICF) which was formally launched as the

Small Scale Industries Credit Scheme (SSICS) in the Third National Development Plan, 1975-1980. The scheme which operated as a matching grant between the Federal and state Governments was designed to make credit available in liberal terms to SMIs and was managed by the states' Ministries of Industry, Trade and Co-operatives.

ii. The Nigerian Bank for Commerce and Industry (NBCI)

The NBCI was set up by the Federal Government through Decree 22 Of 1973 to provide among other things, financial services to indigenous business community particularly SMIs. The NBCI operates as the apex financial institutional body for SMIs. The NBCI administered the SME World Bank Loan Scheme of US \$41 million secured in 1984. The scheme had maturities period ranging from 4 to 10 years including a moratorium of 2 to 4 years, and the foreign exchange risk was borne by the Federal Government.

iii. The Nigeria Industrial Development Bank (NIDB)

The NIDB which set up in 1964 provided credit and other facilities to industrial enterprises especially medium and large-scale ones. Some small-scale enterprises also come under its scope of financing of terms which are relatively soft. An attractive feature of NIDB's financing is policy of equity participation in the paid up share capital of some of the projects financed.

iv. The National Economic Reconstruction Fund (NERFUND)

NERFUND was set up in January 1989 to provide medium to long-term funds at lower interest rates than prevailing rates with 5-10 years maturity period including a

grace period of 1-3 years for wholly Nigeria owned SMIs. Access to NERFUND facilities is restricted to manufacturing and other enterprises which source at least 60% of their raw materials and other inputs locally. Funds are disbursed to beneficiaries through participating banks.

**Empirical Literature**

Stiglitz and Marilou (1996), in their study on financial management, public policy and the Asian miracle, the high performing East Asian economies using panel regression model for a panel data study establishes that government funds to private investment leads to increased productivity. The study observes that the two broad interventions engaged by these East Asian countries are that, their governments directed credit to priority firms, groups, industries and other activities like exports or high-technology projects. Secondly, that their governments directed credit for social reasons, often to small farmers, small and medium-scale enterprises.

Empirical studies carried out by Calomiris and Himmelberg (1995) on directed credit programmes for agriculture and industry: arguments from theory and fact using vector autoregressive model reveal that policy-based finance was effective in stimulating initial growth and encouraging private investment in priority industries in Japan.

Itoh and Urata (1994) examined how Japan's public and private sectors support small and medium-size enterprises (SMEs) in their study on small and medium size enterprise support policies in Japan. Their study was based on a survey of 107 firms. Data analyzed with descriptive statistics reveal that technical and marketing support came largely through private channels while public institutions played only a subordinate role. Most loans for Japan's SMEs were provided under competitive

market conditions but three sources of directed credit loans from specialized parastatals, loans channelled through local governments, and loan guarantees accounted for about 20% of all SME borrowing and 35% to 60% of investment borrowing.

Similarly, Kim and Nugent (1994) carried a study on the Republic of Korea's small and medium-sized enterprises and their support systems. The findings of this study, which drew from a survey of 122 SMEs, indicate that in spite of the existence of a dense network of public technology-support institutions in Korea, the SMEs tend to turn to private sources of technical support more often than to public institutions. The study also establishes that financial assistance was the most critical form of support for Korean SMEs and that government intervention in finance was very passive. The Korean government had made extensive use of parastatal finance institutions targeted credit, and credit guarantee schemes.

Eataz and Malik (2009) evaluated the relationship between financial development and economic growth in selected developing countries. The study was a panel data work and was evaluated with panel regression model. Results of the study show that bank credits to the private sector significantly increase the productivity of workers and as such, facilitates long-run economic growth.

Jayaraman & Singh (2007) carried a study on foreign direct investment and employment creation in Pacific Island countries: an empirical study of Fiji using error correction model. The result indicates that availability of credit to private sector has a positive effect on employment. The implication of this study is that availability of credit to the private sector increases

private sector investment and that reduces unemployment in Fiji.

The result of the study by Obadan and Odusola (2001) on productivity and unemployment in Nigeria, using Granger Causality test methodology establishes that there is a unidirectional relationship between national labour productivity and national unemployment in Nigeria. The study also shows that productivity and unemployment are inversely related. According to them, since more employment means more income for the poor, which in turn implies a greater demand for locally produced basic consumption goods, it is imperative for government to ensure growth and development of the rural and small-scale urban sectors. This should consider, very seriously, encouraging people (private investments) to establish more labour-intensive small scale enterprises which have the propensity to create more jobs and higher incomes.

Bakare (2010) examined the Determinants of the Urban Unemployment in Nigeria. The variables for the study include level of unemployment and demand for labour, supply of labour, population, inflation, capacity utilization, gross capital formation and nominal wage rate. Using time series secondary data and parsimonious error correction mechanism, the study found that the rising nominal wages and the accelerated growth of population which affected the supply side through a high and rapid increase in labour force relative to the absorptive capacity of the economy appear to be the main determinant of high unemployment in Nigeria.

Gali (1999) carried a study on the Effect of Productivity on Unemployment. The result showed that productivity had significant effect on unemployment which in turn confirms that technology shock has a significant effect on productivity growth.

This result is in line with both the classical and Keynesian theories which posit that as output is increasing unemployment is decreasing.

Balcerzak and Mirosława (2011) carried a study on Foreign Direct Investment and Unemployment in Poland. The empirical investigation was based on aggregate quarterly data and VAR methodology was adopted in the Analysis. The result of the study showed that FDI has negative impact on unemployment. The analysis of impulse response function shows that the FDI impulse indicates decrease of unemployment rate, but then slowly growth to initial state of this rate takes a place. It means that even if generally FDI have some potential to deteriorate the unemployment in the short-run, the government should still implement policies that attract investments fulfilling above mentioned criteria, which would result in positive long term results of foreign capital inflow. The implication of the study is that FDI has the tendency of reducing unemployment in Poland.

The study of Akeju and Olanipekun (2014) examined the Relationship between Unemployment Rate and Economic Growth in Nigeria, Error Correction Model (ECM) and Johansen cointegration test were employed to determine both the short run and long run relationships among the variables employed in the study. Empirical findings showed that there was both the short and the long run relationship between unemployment rate and output growth in Nigeria. The result of the study was at variance with economic theory; however, the study recommended among other things the increase the attraction of foreign direct investment (FDI) to reduce the high rate of unemployment in the country.

Schoeman, Blaauw and Pretorius (2008) reviewed Determinants of Unemployment in South Africa. They used the macro

economic variables, real exchange rate and unionisation as a percentage of formal employment, crude oil prices, capital stock and banker's acceptance rate. The results showed that there was an inverse relationship between investment and unemployment. The implication of the study is that increase in investment reduced unemployment in South Africa.

Eita and Ashipala (2010) worked on Determinants of Unemployment in Namibia for the period of 1971-2007. They used macro economic variables for unemployment model. They used Engle and Granger approach to estimate the model. The results showed that there is negative relationship between inflation and unemployment, positive between wage rate and unemployment and negative between investment and unemployment. The implication of the study is that increase in investment reduced unemployment in Namibia.

Mohammad (2017) examined the determinants of unemployment rate in Jordan: a multivariate approach. The study engaged vector autoregressive model in analysing data, and establishes that private investment has a negative impact on unemployment rate in Jordan. The study recommends that increase in private sector investment to further reduce high unemployment rate in Jordan.

The study of Abiad, Furceri and Topalova (2017) on macroeconomic effects of public investment: evidence from advanced economies, establishes that increase in public investment raises output, crowds in private investment and reduces unemployment. The study was a panel data study of 17 advanced economies. The study recommends that countries with relatively low efficiency of public investment, should concentrate on raising the quality of

infrastructure investment by improving the public investment process.

### Basic analysis and methodology

To pursue the objective of this study which is to examine the impact of private sector investment on unemployment in Nigeria, the study adopted a model following after the works of Hussain and Nadol (1997) which postulate that growth of employment is demand determined and that the fundamental determinants of long-term growth of output influence the growth of employment. Therefore, the factors that will reduce unemployment are aggregate demand components plus a vector of other variables. The model is specified as follows:

$$UNE_t = f(PIV_t, PUV_t, LF_t, POP_{gw_t}, RGDP_t) \quad 3.1$$

Where:

$UNE_t$  = unemployment rate in Nigeria for period t

$PIV_t$  = private sector investment in Nigeria for period t

$PUV_t$  = public sector investment in Nigeria for period t

$LF_t$  = Nigerian labour force for period t

$POP_{gw_t}$  = population growth rate in Nigeria for period t

$RGDP_t$  = real gross domestic product

t = 1, 2, 3... in years

The linear function to be estimated is then given as follows:

$$UNE_t = \beta_0 + \beta_1 PIV_t + \beta_2 PUV_t + \beta_3 LF_t + \beta_4 POP_{gw_t} + \beta_5 RGDP_t + \mu_{2t} \quad 3.2$$

Where,  $\mu_{2t}$  = a stochastic error term, assumed to be independently and normally distributed.

The a priori expectations would require that the parametric coefficients in equation (6) above have the following algebraic signs:

$$\beta_1 < 0, \beta_2 < 0, \beta_3 > 0, \beta_4 > 0, \beta_5 < 0$$

### Results

#### Unit Root Test

Table 1

Variables	ADF Statistic	Critical Values	Order of Integration
RIR	-3.410946	1% = -3.626784 5% = -2.945842 10% = -2.611531	I(0) Stationary at level
POP <sub>GW</sub>	-4.241048	1% = -3.626784 5% = -2.945842 10% = -2.611531	I(0) Stationary at level
$\Delta \ln PIV$	-4.902866	1% = -3.639407 5% = -2.951125 10% = -2.614300	I(1) Stationary at first difference
$\Delta \ln PUV$	-6.168753	1% = -3.632900 5% = -2.948404 10% = -2.612874	I(1) Stationary at first difference
$\Delta \ln PRC$	-4.412675	1% = -3.632900 5% = -2.948404 10% = -2.612874	I(1) Stationary at first difference
$\Delta \ln EXDR$	-4.463450	1% = -3.632900 5% = -2.948404 10% = -2.612874	I(1) Stationary at first difference
$\Delta \ln RGDP$	-3.339751	1% = -3.632900 5% = -2.948404 10% = -2.612874	I(1) Stationary at first difference
$\Delta \ln M2$	-3.195964	1% = -3.639407 5% = -2.951125 10% = -2.614300	I(1) Stationary at first difference
$\Delta UNE$	-6.916544	1% = -3.632900	I(1) Stationary at first difference



		5% = - 2.948404 10% = - 2.612874	
$\Delta \ln LF$	-5.770963	1% = - 3.632900 5% = - 2.948404 10% = - 2.612874	I(1) Stationary at first difference

Source: Author's Computation from E-Views, version 9.

From the table above, the Mackinnon critical value for rejection of unit root hypotheses indicates that RIR and POPGW are stationary at levels as such integrated at order zero, I (0). Furthermore, LnPIV, LnPUV, LnPRC, LnEXDR, LnRGDP, LnM2, LnLF and UNE are stationary after first differencing and as such they are integrated at order one, I (1). Given that variables are integrated at Order 1(0) and Order 1(1), the Auto – Regressive Distributed Lag (ARDL) estimation technique becomes the most appropriate method.

**Table 2: Bounds Test for co integration relationship in the model**

**Model: Impact of private sector investment on unemployment in Nigeria**

ARDL Bounds Test

Date: 10/20/21 Time: 20:44

Sample: 4 37

Included observations: 36

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	5.500046	5

Critical Value Bounds

Significance	I0 Bound		I1 Bound	
10%	2.26			
			3.35	
5%	2.62			
			3.79	
2.5%	2.96			
			4.18	
1%	3.41			4.68

Source: Author's Computation from E-Views, version 9.

Table 2 shows there are co – integration between private sector investment and independent variables, which emphasize the relevance of the long run concept. The F – statistic value of 5.500046 is greater than the upper bound critical values of 3.35, 3.79, 4.18 and 4.68 at 10%, 5%, 2.5% and 1% significance levels respectively. This confirms the presence of co – integration between private sector investment and independent variables, hence, the null hypothesis of no co – integration is rejected.

**Table 3: Impact of Private Sector Investment on Unemployment in Nigeria**

ARDL Cointegrating And Long Run Form

Dependent Variable: UNE

Selected Model: ARDL(1, 1, 3, 3, 1, 1)

Date: 10/20/20 Time: 20:54

Sample: 1 38

Included observations: 36

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNPIV)	-5.523638	1.060898	-5.206566	0.0001
D(LNPUV)	-1.186788	1.084781	-1.094035	0.2884
D(LNPUV(-1))	-5.094466	1.288179	-3.954780	0.0009
D(LNPUV(-2))	-2.917671	1.481338	-1.969619	0.0645
D(LNLF)	4.708584	3.406455	1.382253	0.1838
D(LNLF(-1))	-12.305058	3.326591	-3.699000	0.0016
D(LNLF(-2))	41.637555	7.882645	5.282181	0.0001
D(LNPRC)	-0.391772	1.639369	-0.238977	0.8138
D(LNRGDP)	-2.770669	12.201377	-0.227078	0.8229
CointEq(-1)	-0.808340	0.075105	-10.762782	0.0000

$$\text{Cointeq} = \text{UNE} - (-17.0788 * \text{LNPIV} + 10.1226 * \text{LNPUV} - 36.0642 * \text{LNLF} + 4.3910 * \text{LNPRC} + 45.5905 * \text{LNRGDP} - 35.4363)$$

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNPIV	-17.078764	2.387150	-7.154457	0.0000
LNPUV	10.122560	2.368769	4.273342	0.0005
LNLF	-36.064238	11.050451	-3.263599	0.0043
LNPRC	4.391042	1.697385	2.586945	0.0186
LNRGDP	45.590480	9.105089	5.007143	0.0001
C	-35.436279	116.609511	-0.303888	0.7647

*Source: Author's Computation from E-Views, version 9.*

From table 3 above, most of the estimated coefficients have their expected theoretical signs and are statistically significant in the short run. The results indicate 80.8% annual convergence of unemployment towards long run equilibrium. The results also show that private sector investment has negative and significant impact on unemployment in the short run. Furthermore, in the long run, private sector investment has negative and significant impact on unemployment in Nigeria. Empirical results show that 1% increase in private sector investment in the short run leads to 5.5% decrease in unemployment in Nigeria. This conforms to a priori expectation. Furthermore, 1% increase in private sector investment in the long run results in 17.1% decrease in unemployment in Nigeria. This also conforms to a priori expectation. The result confirms most findings Schoeman, Blaauw and Pretorius (2008).

Public investment has negative and significant impact on unemployment in the short run. This conforms with a priori expectation and also in agreement with Eita and Ashipala (2010). 1% increase public investment in the short run leads to 5.1% decrease in unemployment in Nigeria. However, in the long run, public investment has a positive and significant impact on unemployment as 1% increase in public investment leads to 10.1% increase in unemployment. This result does not conform to a priori expectation.

Labour force of has positive and significant impact on unemployment in the short run. This result conforms to a priori expectation. The empirical result shows that 1% increase in labour force leads to 41.6% increase in unemployment in Nigeria in the short run. The result is in agreement with Bakare (2010). However, in the long run, it has a

negative and significant impact on unemployment. That is, 1% increase in labour force leads to 36.1% increase unemployment (does not conform to a priori expectation).

Private sector credit has negative but insignificant impact on unemployment in the short run. This is in line with a priori expectation and agrees with the finding of Jayaraman and Singh (2005). A 1% increase in private sector credit in the short run leads to 0.4% decrease in unemployment. However, in the long run, it has positive and significant impact on unemployment. That is, 1% increase in private sector credit in the long run leads to 4.3% increase in unemployment (does not conform to a priori expectation).

Finally, real gross domestic product has negative, but insignificant impact on unemployment in the short run. This result is in line with a priori expectation. The empirical result shows that 1% increase in real gross domestic product leads to 2.8% decrease in unemployment in Nigeria in the short run. This result is in agreement with findings of Obadan and Odusola (2001), Gali (1999). However, an unconventional result of positive significant impact was obtained for real gross domestic product on unemployment in the long run. That is 1% increase in real gross domestic product leads to 45.6% increase in unemployment in Nigeria (does not conform to a priori expectation).

## **Summary, conclusion and recommendations**

### **Summary of findings**

Private sector investment has negative and significant impact on unemployment in Nigeria both in the short run and in the long run. The null hypothesis which states that private sector investment has no significant impact on unemployment in Nigeria is

hereby rejected. This implies that private sector investment has significant impact on unemployment in Nigeria both in the short and long run.

The speed of adjustment of unemployment to long run equilibrium in the model has an error correction term coefficient of -0.80834 and t - statistic value of -10.762782.

### Conclusion

Results show that private sector investment has negative and significant impact on unemployment in Nigeria both in the short run and in the long run. A 1 percent increase in private sector investment in the short run leads to 5.5 percent decrease in unemployment in Nigeria. Furthermore, 1 percent increase in private sector investment in the long run results in 17.1 percent decrease in unemployment in Nigeria. The result agrees with the findings of Schoeman, Blaauw and Pretorius (2008).

### Recommendations

Since private sector investment has negative and significant impact on unemployment both in the short run and long run, such that 1 percent increase in private sector investment leads to 5.5 percent decrease in unemployment in the short run and 17.1 percent in the long run. The study recommends that the federal government of Nigeria pursues policies geared at providing enabling environment for private sector investment to expand. Some of such policies include increase in public investment in the area of infrastructural development, functional institutions and good governance which will crowd in private sector investment.

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